AMENDMENTS TO THE CLAIMS

In the set of claims within the Application, please amend claims 1-20 as hereinafter indicated.

1. (Currently Amended) A path prediction system for a vehicle, said path prediction system comprising:

a plurality of vehicle state sensors for generating vehicle state signals;

at least one ~~tracking~~ path-tracking sensor for generating a path characteristic signal;

a path prediction module and a path-tracking module for determining a plurality of predicted path estimations of a future path of [[the]] said vehicle in response to data received from each of said plurality of vehicle state sensors and said at least one ~~tracking~~ path-tracking sensor, said path prediction module ~~determining~~ being operable to determine a resultant predicted future path and a path confidence level in response to said plurality of predicted path estimations; and

a controller for performing a countermeasure in response to said resultant predicted future path and said path confidence level.

2. (Currently Amended) A path prediction system as in claim 1, wherein said path confidence level corresponds with the accuracy of said resultant predicted future path.

3. (Currently Amended) A path prediction system as in claim 1, wherein said plurality of vehicle state sensors ~~comprises at least one of~~ includes a vehicle speed sensor, an inertial rate sensor, a yaw rate sensor, [[and]] a steering wheel angle sensor, or a combination thereof.

4. (Currently Amended) A path prediction system as in claim 1, wherein said at least one ~~external~~ path-tracking sensor ~~comprises a lane and road tracking sensor~~ includes a sensor that is operable to both detect and track a road, a road lane, a road marking, or a combination thereof.

5. (Currently Amended) A path prediction system as in claim 1, wherein said at least one path-tracking sensor ~~comprises at least one of~~ includes a vision sensor, a camera, a global positioning system sensor, a radar sensor, a lidar sensor, an ultrasonic sensor, an infrared sensor, [[and]] a wave-ranging sensor device, or a combination thereof.

6. (Currently Amended) A path prediction system as in claim 1, wherein said path prediction system further ~~comprising~~ comprises an adaptive task scheduler for determining processing tasks to perform, and said vehicle state sensors ~~generating~~ are operable to generate said ~~plurality of~~ vehicle state signals in response to said processing tasks.

7. (Currently Amended) A path prediction system as in claim 1, wherein said path prediction system further ~~comprising~~ comprises an adaptive task scheduler for determining processing tasks to perform, and said path prediction module ~~determining~~ is operable to determine said resultant predicted future path and said path confidence level in response to said processing tasks.

8. (Currently Amended) A path prediction system as in claim 1, wherein said path prediction module ~~assigns~~ is operable to assign a high confidence level to said resultant predicted future path when a majority of said ~~plurality of~~ predicted path estimations are in agreement.

9. (Currently Amended) A path prediction system as in claim 1, wherein said path prediction module ~~selects~~ is operable to select said resultant predicted future path from said plurality of predicted path estimations and ~~assigns~~ assign a low level of confidence to [[said]] the selection.

10. (Currently Amended) A path prediction system as in claim 1, wherein said path prediction module and said path-tracking module, [[in]] for determining [[a]] said plurality of predicted path estimations, ~~determines~~ are operable to respectively determine a first predicted path in response to data received from ~~a first~~ one of said vehicle state ~~sensor~~ sensors and ~~determines~~ determine a second predicted path in response to data received from at least one said path-tracking sensor.

11. (Currently Amended) A path prediction system as in claim 10, wherein said path prediction module ~~determines~~ is operable to determine said resultant predicted future path and said path confidence level in response to said first predicted path and said second predicted path.

12. (Currently Amended) A path prediction system as in claim 10, wherein said path prediction module, [[in]] for determining [[a]] said plurality of predicted path estimations, ~~determines~~ is operable to determine a third predicted path in response to data received from ~~a second~~ another one of said vehicle state ~~sensor~~ sensors.

13. (Currently Amended) A path prediction system as in claim 12, wherein said path prediction module ~~determines~~ is operable to determine said resultant predicted future path and said path confidence level in response to said first predicted path and said third predicted path.

14. (Currently Amended) A path prediction system as in claim 1, wherein said path prediction module, [[in]] for determining [[a]] said plurality of predicted path estimations, ~~determines~~ is operable to determine a first predicted path in response to data received from ~~a first~~ one of said vehicle state ~~sensor~~ sensors and ~~determines~~ also determine a second predicted path in response to data received from ~~a second~~ another one of said vehicle state ~~sensor~~ sensors.

15. (Currently Amended) A path prediction system as in claim 1, wherein said path prediction module ~~determines~~ is operable to determine a substantially instantaneous position of [[the]] said vehicle in response to said vehicle state signals[[,]] and ~~determines~~ also determine both said resultant predicted future path and said path confidence level in response to said instantaneous position.

16. (Currently Amended) A method of performing a countermeasure ~~within~~ onboard a vehicle, said method comprising the steps of:

(a) ~~generating~~ operating vehicle state sensors to generate vehicle state signals;

(b) ~~generating~~ operating a path-tracking sensor to generate a path characteristic signal;

(c) ~~determining~~ operating a path prediction module and a path-tracking module to determine a plurality of predicted path estimations of a future path of said vehicle in response to data received from ~~a plurality of~~ each of said vehicle state sensors and ~~a tracking~~ said path-tracking sensor;

(d) ~~determining~~ operating said path prediction module to determine a resultant predicted future path and a path confidence level in response to said plurality of predicted path estimations; and

(e) ~~performing~~ operating a controller to perform a countermeasure in response to said resultant predicted future path and said path confidence level.

17. (Currently Amended) A method as in claim 16, wherein ~~determining a plurality of predicted path estimations comprises determining~~ step (c) is at least partially accomplished by operating said path prediction module and said path-tracking module to respectively determine a first predicted path in response to data received from ~~a first~~ one of said vehicle state ~~sensor~~ sensors and ~~determining~~ determine a second predicted path in response to data received from said path-tracking sensor.

18. (Currently Amended) A method as in claim 16, wherein ~~determining a plurality of predicted path estimations comprises determining~~ step (c) is at least partially accomplished by operating said path prediction module to determine a first predicted path in response to data received from ~~a first~~ one of said vehicle state ~~sensor~~ sensors and ~~determining~~ also determine a second predicted path in response to data received from ~~a second~~ another one of said vehicle state ~~sensor~~ sensors.

19. (Currently Amended) A path prediction system for a vehicle, said path prediction system comprising:

a plurality of vehicle state sensors for generating vehicle state signals;

at least one ~~tracking~~ path-tracking sensor for generating a path characteristic signal;

a path prediction module and a path-tracking module for determining a plurality of predicted path estimations of a future path of said vehicle in response to data received from each of said plurality of vehicle state sensors and said at least one ~~tracking~~ path-tracking sensor, said path prediction module ~~comparing~~ being operable to compare said plurality of

predicted path estimations and ~~determining~~ also determine a resultant predicted future path and a path confidence level in response to [[said]] the comparison; and

a controller for performing a countermeasure in response to said resultant predicted future path and said path confidence level.

20. (Currently Amended) A path prediction system as in claim 19, wherein said path prediction module, [[in]] for comparing said plurality of predicted path estimations, ~~determines~~ is operable to determine ~~at least one of~~ an average, a median, an approximate center point, a mean, an extrapolation, [[and]] a functional result, or a combination thereof of said plurality of predicted path estimations.